

Serial No. 09/981,161
Docket No. NEC N01293
Amendment E under Rule 116

REMARKS

The title has been amended as required by the Examiner. The specification has been amended to correct minor clerical errors. No new matter has been entered. The abstract has been rewritten in a single paragraph, i.e., to conform to U.S. practice. Claims 1 and 4 have been canceled, without prejudice.

Turning to the art rejection, claims 1 and 4 have been cancelled. As to the remaining claims, and considering first the rejection of claim 2, the Examiner asserts that Arai et al. (U.S. Patent No. 6,316,874) discloses an organic electroluminescence device (Fig. 2) comprising an anode (3), an organic layer containing at least one organic light emitting layer (5), a cathode (2, 4), wherein the cathode has a first cathode (4) and a second cathode (2) as in claim 2, a cap used to encapsulate device main components having anode (3), organic layer (5) and cathode (2, 4) which are stacked on the insulating substrate, and wherein oxygen is contained in an interface between the organic layer and the cathode (Final Action, page 3, second paragraph).

The Examiner also asserts that Arai et al.'s device (as shown in Fig. 2) comprises a cathode that has a first cathode (4) and a second cathode (2) (Final Action, page 3, second paragraph). However, in Arai et al., a layer component (4) is not labeled as a first cathode but as an inorganic insulating electron injecting layer (column 7, lines 12-36), and the inorganic insulating electron injecting layer comprises an oxide having a low work function (at least one oxide having a work function of lower than 2.5 eV) and an oxide having a high work function (at least one oxide having a work function of 2.5 to 4 eV) (column 3, lines 27-31).

Furthermore, Arai et al. discloses that when there is a possibility that the organic layers may be ashed and so damaged during the lamination of the organic insulating electron injecting

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layer, it is preferable to divide the inorganic insulating electron injecting layer to two layers before lamination. In other words, the first layer is laminated thin with no addition of oxygen, and the second layer is then laminated thick with the addition of oxygen. The oxygen-deficient layer formed without the addition of oxygen should preferably have an oxygen content of the order of 60% to 90%. The oxide layer formed with the addition of oxygen is usually present with the stoichiometric composition of an ordinary oxide (column 5, lines 32-51). As is apparent from the above, with Arai et al.'s device, oxygen is not contained in an interface between the organic layer and the cathode, but in an interface between the organic layer and the inorganic insulating electron injecting layer (a first inorganic insulating electron injecting layer).

In other words, with Arai et al.'s device, the first inorganic insulating electron injecting layer, the second inorganic insulating electron injecting layer, and the cathode are laminated in order on the organic layer, with the first and the second inorganic insulating electron injecting layers being both made of an insulating material, for example, an oxide. However, as recited in claim 2 of the present invention, the first cathode and the second cathode are laminated in order on the organic layer, with the first cathode and the second cathode made of a conductive material, such as a metal. Thus, neither claims 2 and 3, nor claims 5 and 6, which depend respectively thereon, can be said to be anticipated by or obvious from Arai et al.

Accordingly, it is apparent that the layer component (4) is an insulating material made of an oxide, through which "tunnel current" can flow, not an electrode made of a conductive material, for instance, a metal.

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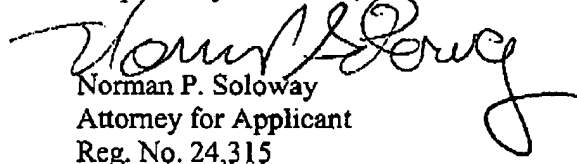
Serial No. 09/981,161
Docket No. NEC N01293
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With regard to the restriction requirement, Applicant confirms his election of claims 1-6, and requests that the non-elected claims be maintained in this Application, without further action, for possible rejoinder and/or for filing of a divisional application.

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Early and favorable action are respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,


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I hereby certify that this correspondence is being sent via facsimile to EXAMINER KARABI GUHARAY of the United States Patent and Trademark Office at facsimile number (703) 872-9319, on November 24, 2003 from Tucson, Arizona.

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